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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,580	09/09/2003	Ronald L. Haner	03-05 US	3398

23693 7590 03/22/2005

Varian Inc.  
Legal Department  
3120 Hansen Way D-102  
Palo Alto, CA 94304

EXAMINER

VARGAS, DIXOMARA

ART UNIT PAPER NUMBER

2859

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/658,580

**Applicant(s)**

HANER ET AL.

**Examiner**

Dixomara Vargas

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 09/09/03, 12/03/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: #42. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 6-11, 14, 17, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Marek (US 6,437,570 B2).

With respect to claims 1, 6, 8, 14, 17, 18 and 19, Marek discloses a nuclear magnetic resonance flow cell assembly for holding a nuclear magnetic resonance sample, comprising (Figure 10a): a flow cell for holding the nuclear magnetic resonance sample (#5); sample flow tubing for providing fluidic access to the flow cell (#6); a connector for fluidically connecting the sample flow tubing to the flow cell (connector #3 on the top and connector #4 on the bottom); a flow cell adhesive securing a lateral surface of the flow cell to a surface of the connector (Column 6, lines 16-20); and an internal flow cell adhesive-separation barrier extending between the surface of the flow cell and the surface of the connector, positioned to separate the flow cell adhesive from an interior of the flow cell and to center the flow cell with respect to the connector (Figure 1); and a set of NMR coils coupled to the flow cell assembly for performing a NMR measurement on the sample (RF coil system #1).

4. With respect to claim 7, Marek discloses the connector includes: a lateral wall enclosing a flow cell connector bore sized to accommodate an end region of the flow cell (Figure 10a, #2), wherein the flow cell adhesive is situated along the flow cell connector bore (Column 6, lines 16-20); and an annular stop for constraining the flow cell longitudinally when the flow cell is positioned in the flow cell connector bore (Figure 10a, #4).

5. With respect to claim 9, Marek discloses the connector comprises a radial adhesive-insertion channel extending from an outer surface of the connector to an inner surface of the connector along the flow cell connector bore (Column 6, lines 16-20; Figures 10a-10b).

6. With respect to claim 10, Marek discloses the connector comprises an adhesive-holding reservoir extending along an adhesive interface between the flow cell and the connector (Column 6, lines 16-20; Figures 10a-10b).

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7. With respect to claim 11, Marek discloses the adhesive-holding reservoir is annular (Column 6, lines 16-20; Figures 10a-10b).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marek (US 6,437,570 B2) in view of Wand et al. (6,198,281 B1).

With respect to claims 2 and 15, Marek discloses the claimed invention as stated above in paragraph 2 except for the internal flow cell adhesive-separation barrier comprises an O-ring. However, Wand discloses the internal flow cell adhesive-separation barrier comprises an O-ring (Figure 6, #26 and #40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Wand's O-ring with Marek's NMR flow cell assembly for holding a NMR sample for the purpose of sealing the components together in a more secure manner.

10. Claims 3, 4, 12, 13, 16, 21, 23, 26- are rejected under 35 U.S.C. 103(a) as being unpatentable over Marek (US 6,437,570 B2) in view of AOA (Applicant's own admission on paper 2 of the remarks filed 01/14/05).

With respect to claims 3, 4, 12, 13 and 16, Marek discloses the claimed invention as stated above in paragraph 2 except for the internal flow cell adhesive-separation barrier comprises a plurality of annular ridges wherein said ridges are integrally formed with the connector; an helical adhesive-holding reservoir; and connector comprising a plurality of longitudinal channels defined along the connector for allowing a passage of a temperature-control gas along the connector. However, it would have been obvious to have the internal flow cell adhesive-separation barrier composed of a plurality of annular ridges wherein said ridges are integrally formed with the connector; an helical adhesive-holding reservoir; and connector comprising a plurality of longitudinal channels defined along the connector for allowing a passage of a temperature-control gas along the connector since it is an obvious variation as disclosed by applicant on page 2 of the remarks filed 01/14/05.

11. With respect to claims 21, 29, 30 and 31, Marek discloses the claimed invention as stated above in paragraph 2 except for the flow cell having a first helical thread along a lateral surface of the flow cell and a second helical thread matching the first helical thread for securing the connector to the flow cell. However, it would have been obvious to have for the flow cell having a first helical thread along a lateral surface of the flow cell and a second helical thread matching the first helical thread for securing the connector to the flow cell since it is an obvious variation as disclosed by applicant on page 2 of the remarks filed 01/14/05.

12. With respect to claim 23, Marek discloses the claimed invention as stated above in paragraph 2 except for the sealing barrier comprises ferrule. However, it would have been obvious to have the sealing barrier comprises ferrule since it is an obvious variation as disclosed by applicant on page 2 of the remarks filed 01/14/05.

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13. With respect to claim 26 and 27, Marek discloses the claimed invention as stated above in paragraph 2 except for the connector comprising a connector body and a distinct tubular extension part secured to the connector body; and wherein the tubular extension part has a tapered outer surface at a distal end of the tubular extension part. However, it would have been obvious to have the connector comprising a connector body and a distinct tubular extension part secured to the connector body; and wherein the tubular extension part has a tapered outer surface at a distal end of the tubular extension part since it is an obvious variation as disclosed by applicant on page 2 of the remarks filed 01/14/05.

14. With respect to claim 28, Marek discloses the claimed invention as stated above in paragraph 2 except for the connector comprising a plurality of longitudinal channels defined along an outer surface of the connector for allowing a passage of a temperature-control gas along the connector. However, it would have been obvious to have the connector comprising a plurality of longitudinal channels defined along an outer surface of the connector for allowing a passage of a temperature-control gas along the connector since it is an obvious variation as disclosed by applicant on page 2 of the remarks filed 01/14/05.

15. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marek (US 6,437,570 B2) in view of Eguchi et al. (US 6,507,191 B1).

With respect to claim 20, Marek discloses the claimed invention as stated above in paragraph 2 except for the step of removing the flow cell assembly from the nuclear magnetic resonance probe through the central bore while the nuclear magnetic resonance probe is positioned in the nuclear magnetic resonance magnet. However, Eguchi discloses the step of

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removing the flow cell assembly from the nuclear magnetic resonance probe through the central bore while the nuclear magnetic resonance probe is positioned in the nuclear magnetic resonance magnet (Column 6, lines 16-26). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to remove the cell from the NMR bore as taught by Eguchi with Marek's NMR flow cell assembly for holding a NMR sample for the purpose of cleaning the cell from the sample and prepared for the examination of the next sample as taught by Eguchi (Column 6, lines 16-26).

16. Claims 22, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marek (US 6,437,570 B2) and AOA (Applicant's own admission on paper 2 of the remarks filed 01/14/05) in view of Wand et al. (6,198,281 B1).

With respect to claim 22, 24 and 25, Marek and Applicant disclose the claimed invention as stated above in paragraph 2 except for the internal flow cell adhesive-separation barrier comprises an O-ring. However, Wand discloses the internal flow cell adhesive-separation barrier comprises an O-ring (Figure 6, #26 and #40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Wand's O-ring with Marek and Applicant's NMR flow cell assembly for holding a NMR sample for the purpose of sealing the components together in a more secure manner.

17. Claims 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marek (US 6,437,570 B2) and AOA (Applicant's own admission on paper 2 of the remarks filed 01/14/05) in view of Eguchi et al. (US 6,507,191 B1).



With respect to claim 20, Marek and Applicant disclose the claimed invention as stated above in paragraph 2 except for the step of removing the flow cell assembly from the nuclear magnetic resonance probe through the central bore while the nuclear magnetic resonance probe is positioned in the nuclear magnetic resonance magnet. However, Eguchi discloses the step of removing the flow cell assembly from the nuclear magnetic resonance probe through the central bore while the nuclear magnetic resonance probe is positioned in the nuclear magnetic resonance magnet (Column 6, lines 16-26). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to remove the cell from the NMR bore as taught by Eguchi with Marek and Applicant's NMR flow cell assembly for holding a NMR sample for the purpose of cleaning the cell from the sample and prepared for the examination of the next sample as taught by Eguchi (Column 6, lines 16-26).

### ***Conclusion***

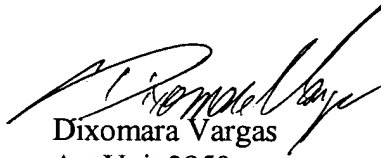
18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional prior art cited in the PTO 892 discloses MR systems for spectroscopy that includes a flow cell and a sample tube inside.

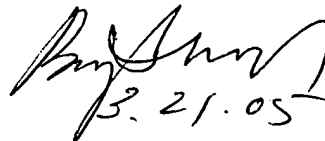
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dixomara Vargas whose telephone number is (571) 272-2252. The examiner can normally be reached on Monday to Thursday from 8:00 am. to 4:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Dixomara Vargas  
Art Unit 2859  
March 19, 2005

  
3.21.05  
BRIJ SHRIVASTAV  
PRIMARY EXAMINER